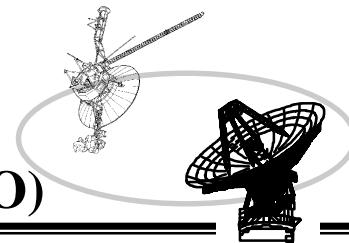


Resource Allocation Planning & Scheduling Office (RAPSO)

Nozomi Forecasted DSN Support

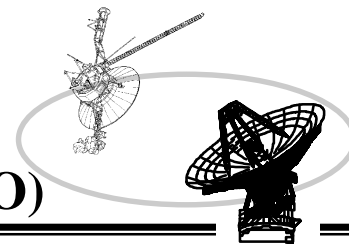
Gene Burke

November 6, 2000



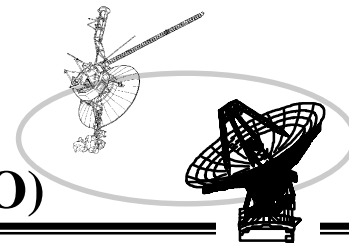
Nozomi Mission Support

- **Mission Parameters**
 - Deep Space Mission to Mars
 - Milestones:
 - Launched: July 03, 1998 from Uchinoura, Kagoshima
 - Earth-Mars Trajectory Injection: June 19, 2003
 - Mars Orbital Insertion(MOI): January 01, 2004
 - 2 Years Prime Mission After MOI
 - References:
 - PSLA: October 2000
 - View Period File: March 18, 1999



Nozomi Mission Support

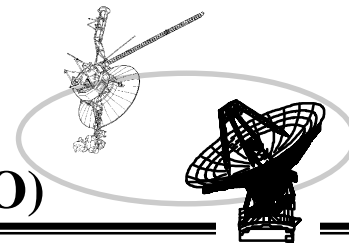
- **DSN Tracking Requirements**
 - Support from Goldstone and Madrid 34m antennas.
 - S-Band (uplink) and X-Band (downlink) Required.
 - Earth Orbit Phase (Present-June 2003)
 - 2001 Support: One 8-hour pass per month - DSS-24,54
 - 2002 Support: One 8-hour pass per month - DSS-24,54
 - » Increases to five 8-hour passes per week from September through December.
 - 2003 Support: One 8-hour pass per month - DSS-24,54
 - Earth - Mars Injection Phase through MOI (June 2003-January 2004)
 - 2003 Support: Five 8-hour passes per week - DSS-24,54
 - » Increases to ten 8-hour passes per week to support Trajectory Correction Maneuvers.



Resource Allocation Planning & Scheduling Office (RAPSO)

Nozomi Mission Support

- **DSN Tracking Requirements**
 - Mars Orbit Phase (January 2004 - December 2005)
 - Mars Occultation Radio Science Data
 - Approximately Three 3-hour Passes per Week - DSS-14,63 (70 meter antennas)

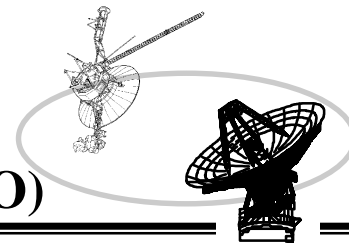


Resource Allocation Planning & Scheduling Office (RAPSO)

Nozomi Mission Support

DSN Loading Study Results 2001-2005

Year	2001	2002	2003	2004	2005
Supportable %	78%	95%	85%	70%	98%

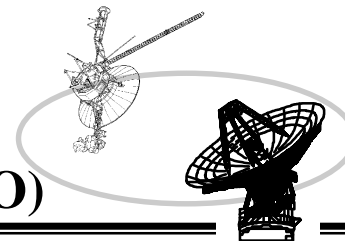


Nozomi Mission Support

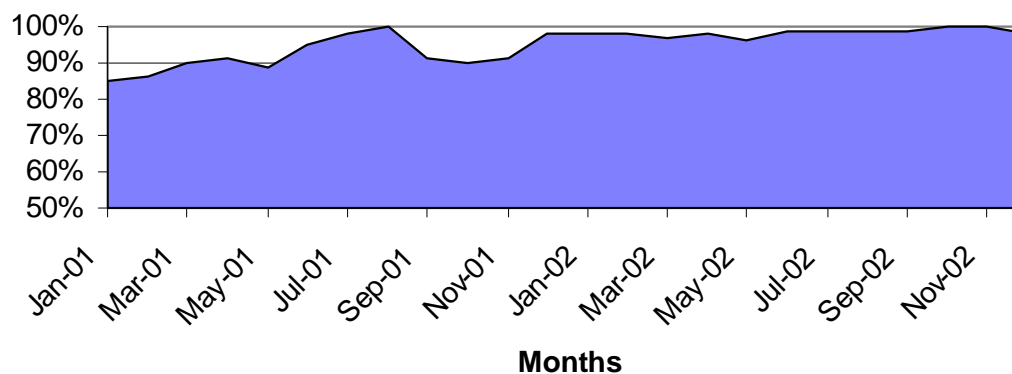
- During January Through April 2004, Contentions Occur With Other Missions Requesting DSS-14,63 Support and are in Nozomi's View. These Missions are:
 - Mars 01 Orbiter is Mapping and Conducting Relay Operations.
 - Mars Exploration Rover A arrives at Mars January 3, 2004 and begins conducting surface operations until approximately April 6, 2004.
 - Mars Exploration Rover B is on Approach, arrives at Mars February 25, 2004 and will be conducting surface operations until approximately May 27, 2004.



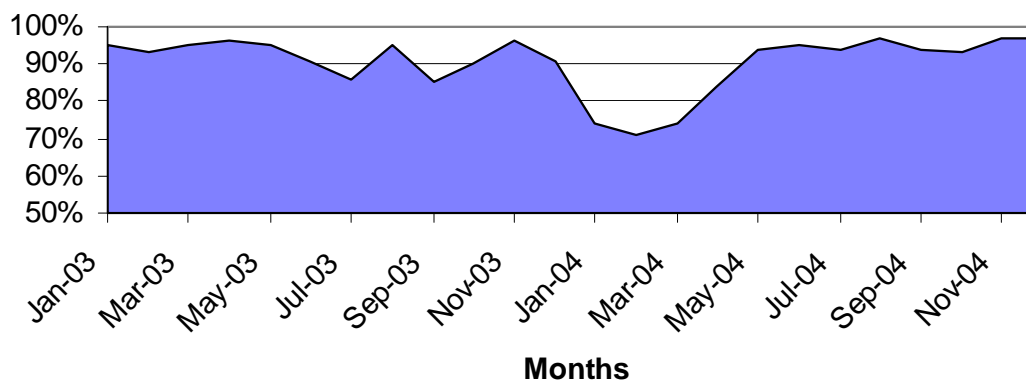
Resource Allocation Planning & Scheduling Office (RAPSO)

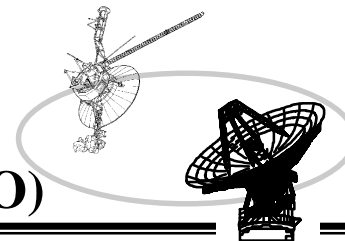


Nozomi
Forecasted Monthly Supportable Percentage



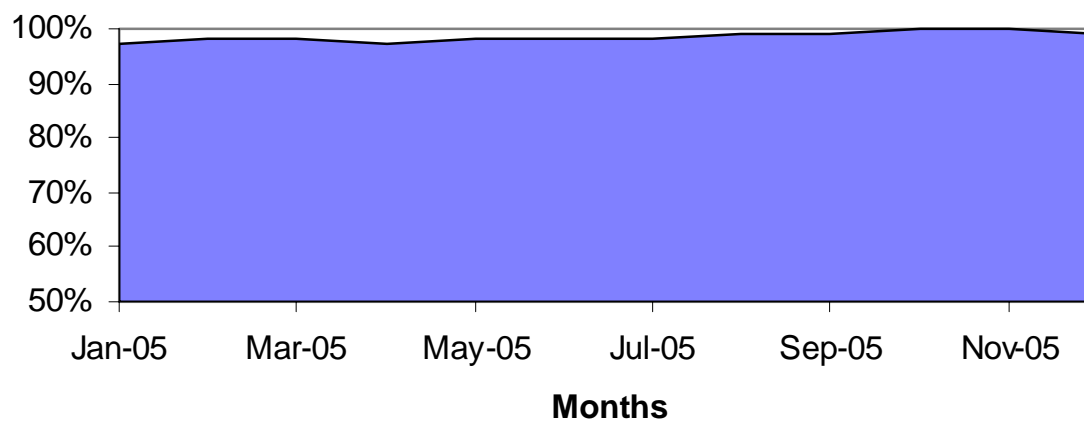
Nozomi
Forecasted Monthly Supportable Percentage

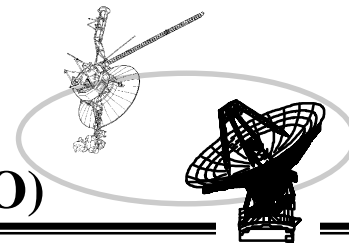




Resource Allocation Planning & Scheduling Office (RAPSO)

Nozomi
Forecasted Monthly Supportable Percentage





Nozomi Mission Support

- **Comments/Questions/Requests**
 - Request any updated Nozomi trajectory and PSLA information.
 - The results of this analysis are preliminary in that the network load changes as requirements for planned missions are input and updated. We will continue to work with the Nozomi project and other users of the DSN to maximize the time available for each user.